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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/064,916	08/29/2002	Ching-Fang Yen	7558-US-PA	9010

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JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE
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EXAMINER

BRAGDON, REGINALD GLENWOOD

ART UNIT PAPER NUMBER

2188

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/064,916

Applicant(s)

YEN ET AL.

Examiner

Reginald G. Bragdon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-18 is/are rejected.
- 7) ☒ Claim(s) 4 and 5 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 August 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I (claims 1-18) in the reply filed on 04 January 2005 is acknowledged. Claims 19-26 have been cancelled by the Applicant.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

3. The drawings filed on 29 August 2002 have been approved by the Examiner.

Specification

4. The disclosure is objected to because of the following informalities:
Paragraph [0012], line 5, "the all" should just be --all--.
Appropriate correction is required.

Claim Objections

5. Claims 1-18 are objected to because of the following informalities:
As per claim 1, line 2, "the number" should be --a number--.
As per claim 1, line3, "is" should be deleted.

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As per claim 1, line 6, “the actual” should be --an actual--.

As per claim 1, line 9, “the actual” should be --an actual--.

As per claim 1, lines 11-13 (from “the total number” in line 11), these lines of the claim seem somewhat verbose given Applicant’s limitations set forth previously in the claim and could be rewritten as --the total pin number is not less than the first number of pins--.

As per claim 2, again, given the limitations set forth in claim 1, lines 1-4 (from “the externally-accessible”) of this claim could be rewritten as --the externally-accessible storage capacity is equal to the first data storage capacity plus the second data storage capacity--.

As per claims 3-8, it appears that the terms “first” and “second” should be reversed in these claims. For example, in claim 3, the memory device with the greater number of pins (i.e. the “first memory device” as set forth in claim 1) is disclosed (see figure 2) as having a plurality of segments. However, Applicant has set forth in this claim that the second memory device (having less pins than the first memory device) comprises a plurality of segments, which is contrary to the disclosure.

As per claim 3, line 3, “the data storage capacity of the first memory device” should be --the first data storage capacity--.

As per claim 3, lines 3-4, “the storage space” should just be --storage space--.

As per claim 5, lines 2-3, “whose data storage capacity equals to each segment in the second memory device” should be --whose data storage capacity equals the data storage capacity of each segment in the first memory device,--.

As per claim 6, lines 5-6, “the externally-accessible total storage space of the multi-memory architecture” should be --the total memory capacity--.

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As per claim 6, line 6, "the currently" should be --a currently--.

As per claim 6, line 7, "the storage" should be --a storage--.

As per claim 6, line 8, "the segment" should be --a segment--.

As per claim 7, line 2, "first segment" should be --second memory device--.

As per claim 8, line 4, "which is" should be --a second memory replacement segment--.

As per claim 9, line 2, "having" should be --has--.

As per claim 10, line 6, "second" should be --first--.

As per claim 11, line 1, "the externally" should be --an externally--.

As per claim 11, lines 3-4, these lines could be rewritten as --to the first data storage capacity plus the second data storage capacity--.

As per claims 12-18, it appears that the terms "first" and "second" should be reversed in these claims.

As per claim 12, line 3, "data storage capacity of the first memory device" should be --first data storage capacity--.

As per claim 12, line 3, "the storage" should be --a storage--.

As per claim 14, line 2, "whose" should be --a replacement segment--.

As per claim 14, line 3, "which" should be --a replacement segment--.

As per claim 15, lines 2-3, "second memory device" should --first data storage capacity--.

As per claim 15, line 3, "which" should be --the replacement memory area--.

As per claim 15, line 4, "first memory device" should be --second data storage capacity--.

As per claim 15, line 5, "the" after "allow" should be --an--.

As per claim 15, line 6, "the currently" should --a currently--.

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As per claim 15, line 7, replace “and” with --,--.

As per claim 15, lines 8, “the segment” should be --a segment--.

As per claim 15, line 10, --device-- should be added after “memory”.

As per claim 16, line 2, “the first segment” should be --the second memory--.

As per claim 17, line 4, “which is” should be --a second memory replacement segment--.

As per claim 18, line 2, “having” should be --has--.

All dependent claims are objected to as having the same deficiencies as the claims they depend from.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 6-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 6, lines 6-9, it is not clear what is meant by “to cover the currently... and the first memory device”.

As per claim 6, line 9, it is not clear what is meant by “in some segments of the currently-accessed memory” in context.

As per claim 7, it is not clear what Applicant is trying to set forth in this claim.

As per claim 9, it is not clear what Applicant is trying to set forth in this claim, in particular since there appears to be no clear link between the “pin configuration” and the “first memory device having a total data capacity”.

As per claim 10, lines 5-6, “compatible with the pin configuration” is vague since it is not clear whether this means 1) the multi-memory architecture has the same number of pins as the first memory device or 2) the first memory device is merely accessible using the pin configuration of the multi-memory architecture.

As per claim 15, lines 6-9, it is not clear what is meant by “to cover the currently... and the first memory device”.

As per claim 15, line 9, it is not clear what is meant by “in some segments of the currently-accessed memory” in context.

As per claim 16, it is not clear what Applicant is trying to set forth in this claim.

As per claim 18, it is not clear what Applicant is trying to set forth in this claim, in particular since there appears to be no clear link between the “pin configuration” and the “first memory device having a total data capacity”.

All dependent claims are rejected as having the same deficiencies as the claims they depend from.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-3 and 10-12 are rejected under 35 U.S.C. 102(e) as being anticipated by

Ayukawa et al. (6,411,561).

As per claim 1, Ayukawa et al. teaches a multi-chip memory architecture including a DRAM (“first memory device”) and a SRAM (“second memory device”). The DRAM has a storage capacity of 32Mb (“first data storage capacity”). See figure 3a. The DRAM also has a number of pins (“first number of pins”), including 16 data and 9 control pins. See figure 2. The SRAM has a storage capacity of 2Mb (“second data storage capacity”) and 16 data and 8 control pins (“second number of pins”). It is noted that the number of address pins to be included in the “first number of pins” and “second number of pins” appears to be the same (see figures 3a/3b or 4a/4b), although the actual number of pins required to address 32Mb is greater than the number bits required to address 2Mb, thereby keeping the “first number of pins” greater than the “second number of pins”. The “total pin number” is 16 data pins plus 21 address pins, plus 19 control pins (see figure 1), which is greater than (i.e. “not less than”) the “first number of pins”. See figure 1.

As per claim 2, the “externally-accessible total data storage capacity” is 34Mb (the sum of the 32Mb DRAM and 2 Mb SRAM). See figure 4A.

As per claim 3, the DRAM has a plurality of either 2Mb or 512Kb “segments”, where the SRAM shadows or overlaps (i.e. “replaces”) in the address space of the DRAM. See figures 3a and 3b, and column 9, lines 24-41.

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As best as the Examiner can tell given the ambiguities in claims 10-12 detailed above, claims 10-12 are rejected for the same reasons as claims 1-3, respectively, as being anticipated by Ayukawa et al.

Remarks

10. No prior art has been applied to claims 6-9 and 13-18 given the ambiguities in the claims as set forth in the rejection of the claims under 35 U.S.C. 112, second paragraph, above.

Allowable Subject Matter

11. Claims 4-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, as well as overcoming any objections to the claims set forth above.

Conclusion

12. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

All "OFFICIAL" patent application related correspondence transmitted by FAX must be directed to the central FAX number at **(703) 872-9306**:

"INFORMAL" or "DRAFT" FAX communications may be sent to the Examiner at **(571) 273-4204**, only after approval by the Examiner.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Fourth Floor (receptionist).

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13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reginald G. Bragdon whose telephone number is (571) 272-4204. The examiner can normally be reached on Monday-Thursday from 7:00 AM to 4:30 PM and every other Friday from 7:00 AM to 3:30 PM.

The examiner's supervisor, Mano Padmanabhan, can be reached at (571) 272-4210.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

RGB
March 3, 2005

Reginald G. Bragdon
Reginald G. Bragdon
Primary Patent Examiner
Art Unit 2188